

NASA Stennis Space Center Environmental Resources Document

12.0 Historic, Archaeological, and Cultural Resources

12.1 Regulatory Overview

U.S. Environmental Protection Agency (EPA) regulations 40 C.F.R. § 6, 40 FR 16814 Subpart C of the National Environmental Policy Act (NEPA) procedures, "Coordination with Other Environmental Review and Consultation Requirements," states that NEPA is subject to the requirements of the Historic Sites Act of 1935, the National Historic Preservation Act (NHPA) of 1966, the Archaeological and Historic Preservation Act, and Executive Order 11593, entitled Protection and Enhancement of the Cultural Environment. The review procedures of these statutes and orders are independent of NEPA requirements.

Section 100(a)(2) of the National Historic Preservation Act (16 U.S.C. 470 et seq.) was amended in 1992 to require that Federal agencies establish a historic preservation program for the identification and protection of historic properties under their jurisdiction, and ensure that such properties are managed and maintained in a way that considers their historic and cultural values.

In April 1995, NASA Environmental Management implemented its Historic Preservation Plan, which compiles the management actions of Stennis Space Center's historic resources and provides management for future historic resources. NASA's historic properties compliance status at SSC is fully discussed in the SSC Historic Preservation Plan, which will be updated no later than every six years.

The SSC Historic Preservation Plan discusses specific short term and long term management actions required by Federal laws and regulations for the proper protection and stewardship of identified historic properties at SSC. A survey of the Gainesville Site has been completed (7) resulting in Gainesville being nominated to the National Register for Historic Places (NRHP) (8). Table 12-1 discusses the historic resources located at SSC, their status according to the NRHP, and the proposed or effective management actions regarding these sites.

All activities undertaken in accordance with this Plan will be conducted in accordance with the Secretary of the Interior's Standards and Guidelines for Identification (48 FR 44720-23) and

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Table 12 - 1
SSC Historic Resources, Management Actions

SITE	NRHP STATUS	MANAGEMENT ACTIONS
Rocket Propulsion Test Stands	National Historic Landmark	<ul style="list-style-type: none">• Submittal of configuration changes report to Mississippi State Historic Preservation Office• Annual summary to National Council of State Historic Preservation Officers and Advisory Council of Historic Places
Gainesville	Nominated to National Register	<ul style="list-style-type: none">• Quarterly monitoring and completion of inspection summaries• Annual submission of inspection summaries to Mississippi State Historic Preservation Office
Logtown	Potentially eligible	<ul style="list-style-type: none">• Ground testing of fee owned lands to determine National Register eligibility• Quarterly monitoring and completion of inspection summaries• Annual submission of inspection summaries to Mississippi State Historic Preservation Office

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SITE	NRHP STATUS	MANAGEMENT ACTIONS
Era Man in Space Structures (Bldgs. 2101, 1100, 3204, 3305, 2204, 3203, 3201, 2201, 1201, 4995, 1200, 3202, 1105, 4400, 2205, 2203, 1110, 8201, and 2105)	Potentially eligible in the year 2013	<ul style="list-style-type: none"> • Formal NRHP review will be conducted at the 50 year threshold or the year 2013 • As built, original construction plans for these structures will be archived by SSC if available • Descriptions of original, past, and present functions of each structure will be compiled by SSC and archived
Acoustic Buffer Zone	Case by case determinations	Case by case determinations for archaeological survey of easement lands

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take into account the National Park Service publication The Archaeological Survey: Methods and Uses (King 1978). Maintenance of historic buildings and structures carried out under this Plan will at a minimum adhere to the standards and guidelines set forth in the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (NPS 1990). Archaeological work will adhere to the various standards set forth in the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 FR 44716).

12.2 Prehistory and History of SSC Area

The following discussion is taken from a 1988 cultural resources investigation of SSC conducted by the Mobile District of the U.S. Army Corps of Engineers (COE).

The term Paleo-Indian refers to those prehistoric populations that inhabited North America from the end of the Pleistocene era (10,000 BC) through the early part of the Holocene era (6,000 BC). The population during the early Paleo-Indian times in the area of the present day SSC is generally viewed as consisting of small groups of wide-ranging nomads following herds of megafauna, such as mammoth. They lived in small campsites and left few traces of their occupation. As the species of big game became extinct, a shift to dependence on local flora and fauna occurred.

In the Archaic period (6,000 BC - 2,000 BC), warmer temperatures fostered a rise in the level of the sea and climatic changes, which resulted in different floral and faunal communities. Human subsistence patterns shifted toward a greater dependence on the wide variety of woodland and riverine resources. Settlements became more permanent and inhabitants took advantage of diverse resources, creating specialized artifacts. A greater variety of projectile point forms occur, while other tools such as knives and scrapers remain almost unchanged.

The on-set of the Post-Archaic is generally associated with the appearance of the bow and arrow, pottery making, agricultural and, to some extent, mound building. The Mississippian period (AD 1000 - AD 1700), the last major prehistoric culture in North America, is considered by many to represent the highest prehistoric civilization in eastern North America. The combination of traits such as status burials, large scale agriculture and massive mound construction suggests that Mississippian society was less egalitarian than previous cultures (9).

Prior to European settlement, the lower Pearl River area around SSC was inhabited by Indians of the Muskogean group (the Acolapissa, the Choctaw, the Pensacola, and the Tangipahoa) and the Siouan group (the Biloxi). European exploration of the area took place from about 1500 to 1699, when the

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first European settlement in the area was established at Biloxi, in what is now Mississippi, by Pierre Le Moyne Sieur d'Iberville, a Frenchman. The French occupied the region until 1763, when the Treaty of Paris was signed, and Spain ceded Louisiana east of the Mississippi River to Great Britain. The colony of West Florida was established along the Gulf Coast with all lands north of the colony considered Indian Territory.

In 1779, Spain declared war on Great Britain and once again gained control of land east of the Mississippi River, including the colony of West Florida. The Spanish were liberal in granting land to settlers, giving grants at no cost to anyone who lived on and cultivated a reasonable amount of land for at least three years. By 1810, most of the inhabitants of West Florida were Americans or English, who revolted against the Spanish in the West Florida Rebellion of 1810. Following this rebellion, all of the Pearl River belonged to the United States. In 1817, Mississippi became a state, with the Pearl River designated as the boundary between Mississippi and Louisiana.

During the early 1800s, settlement in the region occurred mostly along the Pearl River. Cotton became the most important cash crop, with growers along the river sending the cotton on flat boats to the gins at Gainesville and Pearlinton. In the mid-1830s, logging began in the region and sawmills were built at Gainesville, Logtown, and Pearlinton. By the late 1800s, cotton had declined in importance, and lumber became a major industry with Pearlinton being one of the largest lumber centers in the United States. Although most of the major sawmills in the area closed in the early 1900s, logging remained an important industry in the area around SSC. A large portion of the land in the Buffer Zone is currently harvested for timber.

Because of the importance of the Pearl River to transportation, the area around SSC was used extensively by confederate troops and ships during the Civil War. Prior to the Civil War, in 1814, Andrew Jackson and his troops may have camped near Gainesville during their march to the Battle of New Orleans (9).

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12.3 Previous Cultural Resources Studies

In 1988, the COE conducted an archaeological survey of the proposed Advanced Solid Rocket Motor (ASRM) site and three proposed sites for relocation of the Hazards Test Range. An archaeological reconnaissance was also conducted on all other land within the SSC Fee Area. The survey found that, historically, the land at SSC has been severely disturbed by timber harvesting and the associated naval stores industry during the late nineteenth and early twentieth centuries. More recently, the land was disturbed by the construction of the facility during the 1960s, making it unlikely that undisturbed archaeological sites would be found (8).

No archaeological resources were found at any of the four locations included in the archaeological survey. Because all of the locations are in low elevations away from the Pearl River floodplain and border shallow, intermittent drainages, no archaeological resources were anticipated.

The COE completed a reconnaissance of the remainder of the Fee Area to determine if archaeological resources were present or could reasonably be predicted in the areas of SSC not yet surveyed. Staff determined from the reconnaissance that only those areas bordering the Pearl River floodplain had potential for the presence of archeological resources, and a pedestrian survey of this area was conducted. No evidence of prehistoric or aboriginal sites was found in any of the areas examined. Based on these findings, COE concluded that within the Fee Area, only the townsite of Gainesville would require future archaeological considerations if land-disturbing activities were proposed for that area (9).

Prior to the 1988 survey and reconnaissance, three archaeological sites bordering the Pearl River floodplain had been identified at SSC. The Mississippi Department of Historic Preservation as 22 Ha 530, 22 Ha 531, and 22 Ha 580 identified these three sites. Site 22 Ha 530 is located north of the Gainesville site along the Southern Railroad line; site 22 Ha 531 is located just north of the north entrance gate of the facility; and site 22 Ha 580 is north of the Gainesville site along a dirt trail. No information regarding the age or cultural affiliation of these sites is available. Although COE examined each of these three sites during the 1988 investigation, no archaeological materials were located.

When SSC and the Buffer Zone were established in 1961, four towns existed in what is now the Buffer Zone, and one town was located in what is now the Fee Area. The towns of Napoleon, Santa Rosa, Logtown, and Westonia were logging towns located in the Buffer Zone, and Gainesville was a

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logging town located in the Fee Area. When NASA acquired the Fee Area and the restrictive easement in the Buffer Zone, most of the buildings in these towns were removed.

The 1988 COE investigation found six buildings in the Fee Area that predated NASA acquisition of the Fee Area (9). Only one of the buildings, known as the White Church, was over fifty years old; because of termite damage, the original structure was removed. According to the COE, none of the six structures had characteristics that would make them eligible for the National Register of Historical Places.

In 1989, COE conducted two historic properties investigations that included 39 areas within the Buffer Zone owned by NASA (8). The investigations focused on historical house sites, churches, schools, and cemeteries indicated on U.S. Geological Survey quadrangle maps. A few areas adjacent to the Pearl and Jourdan Rivers with potential for prehistoric archaeological resources were also examined. One previously recorded archaeological site, 22 Ha 579, could not be relocated during these investigations.

No significant archeological sites or historic structures were identified as a result of these surveys. In many cases, the COE could find no physical evidence of the structures indicated on the quadrangle maps. All of the house sites examined dated from the twentieth century and appear to warrant no further investigations.

Based on the three surveys of NASA-owned properties conducted by COE in the Fee Area and Buffer Zone, COE made the following recommendations:

- Because virtually all of the high potential areas for archaeological resources have been examined, no further historic properties investigations are necessary, with the exception of the historic sites of Gainesville and Logtown.
- Any ground-disturbing activities to be conducted by NASA on easement properties in the Buffer Zone should be coordinated with the Mississippi State Historic Preservation Officer.
- Prior to any ground-disturbing activities in the historic sites of Gainesville and Logtown, in depth literature and archival studies should be completed, including a detailed history of each town, historic photographs, and maps showing the development of the towns through time.

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NASA conducted an archival search (Phase I testing) and ground survey (Phase II testing) of the townsite of Gainesville and its surroundings in 1994. The town of Gainesville was incorporated in 1846 and served as the Hancock County Seat until the Gainesville courthouse burned down in 1853. Historical research, an archaeological survey, and an excavation were performed in this assessment to verify the original location of the courthouse square. A ground survey and shovel testing were conducted over most of the Gainesville area to search for evidence of prehistoric and historic occupation. During the excavation of test units within the believed courthouse square, portions of a brick foundation were uncovered. This foundation, which was composed of handmade bricks similar to those manufactured in the early 1800's, was sufficiently preserved to distinguish three of the four supposed walls. The shovel testing conducted along the Pearl River frontage revealed pottery and lithic artifacts possibly indicative of a Woodland period occupation at the Gainesville area. The final report on this project was published in July 1996 (7).

The excavated brick foundations of the Hancock County Courthouse Square in Gainesville provided sufficient evidence of the existence of the courthouse structure, and nomination of this site to the NRHP has been accomplished.

12.4 Properties Listed on the National Register of Historic Places

12.4.1 Rocket Propulsion Test Complex

Three test stands at SSC, the A-1 Rocket Propulsion Test Complex (Building 4120), the A-2 Rocket Propulsion Test Complex (Building 4122), and the B-1/B-2 Rocket Propulsion Test Complex, (Building 4220), have been designated as National Historic Landmarks and appear on the National Register of Historic Places (NRHP) (1). These test stands and associated control centers have been designated because of their importance in the testing of Saturn rockets, and the importance of the Saturn rocket in landing men on the moon. A map showing the location of these test stands is included as Figure 12-1.

Normally, such properties have restrictions concerning modification of original structures. However, since the Test Complex was nominated because of its contributions to the Man-in-Space era, and since that function is still in effect today, certain exceptions were granted. These exceptions were outlined in a Programmatic Agreement (PA) signed by NASA, the National Conference of State Historic Preservation Officers (NCSHPO), and the Advisory Council on Historic Preservation (ACHP) on September 20, 1989. Activities to the Testing Complex including demolition,

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dismantling, relocation, or removal of significant elements that contribute to the National Landmark status require consultation with the Mississippi SHPO. Activities that do not affect the characteristics of the Test Complex such as replacing historic hardware, modifications to the original facilities, or new construction compatible with the purpose of the facility shall be mitigated as outlined in the PA.

12.4.2 Gainesville

An area delineated by a plat of Gainesville, bounded by Fraizer Street, Blackman Street, Smyth Street, and the East Pearl River has been determined to be eligible for listing in the NRHP and has been nominated. Future activities that may endanger the remaining integrity of the Gainesville Site will require the completion of a Phase II archaeological survey prior to any disturbance in the area. The impact of such activities will be assessed following the guidelines set by Federal and State legislation as enforced by the Mississippi Department of Archives and History and reflected in the NASA/SSC Historic Preservation Plan. NASA will ensure that professional archaeologists are involved in any design reviews related to projects in the designated area. By involving archaeologists in the pre-construction phase of any project, alternate sites or the resources needed to complete Phase II surveys and research can be planned by NASA, prior to any disturbance of the area. Through these steps, NASA/SSC will fully comply with the interest of the legislation dealing with historic preservation.

The area around Harper's Bayou was only briefly surveyed during this project. Its location near Gainesville, on high land near the Pearl River, suggest that the area on either bank of the bayou may have higher than the normal probability of preserved prehistoric and historic remains. Consequently, it is recommended that the Phase I survey initiated in the Harper Bayou area during this project, be completed prior to the disturbance of the area due to new construction. At this time, sufficient information is not available from this locality to ascertain whether this area should be part of the National Historic Property area.

12.4.3 Logtown

Even though NASA has no plans to develop any of the Fee owned areas within Logtown, Federal laws and regulations require that SSC eventually evaluate those areas in terms of National Register criteria and, ultimately, formally nominate the site if any of the criteria are met. NASA owned land in Logtown is presently under evaluation, with results expected within the next year.

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Should SSC under the terms of its easement become involved in any licensing of activities on easement lands within the townsite of Logtown, archaeological testing and potential avoidance or mitigation will be required by SSC of any proponent of the activity.

12.4.4 Era Man in Space Structures

At the June 30, 1994, meeting with the Chief Architectural Historian for the Mississippi SHPO, discussions were held regarding the possibility of modifying the National Historic Landmark nomination for the Rocket Propulsion Test Complex to include several support buildings. However, in keeping with the decisions of the original National Park Service nomination and the PA for the Rocket Propulsion Test Complex, NASA/SSC feels that these and all other 1963-1967 SSC buildings should be evaluated for National Register eligibility when they meet the 50-year threshold or the year 2013. A listing of these structures can be found in Table 12 - 1.

12.4.5 Acoustic Buffer Zone

In 1989, the Army Corps of Engineers made recommendations regarding archaeological surveys of easement lands in the SSC Buffer Zone, outside of the townsite of Logtown. These recommendations require consultation with the Mississippi SHPO should activities be proposed by or authorized by SSC. Such consultation may or may not result in the requirement for archaeological surveys by the proponent of the action.

12.5 Major Environmental Considerations for Proposed Actions

Before initiating new projects, especially projects that will require new construction, the impacts of the project on existing cultural resources should be considered. Once disturbed, the value of many historic and archaeological sites is lost. Because of their inclusion in the NRHP, the three test stands require special consideration. Any modifications to these structures may initiate a Section 106 review to ensure that their historical value is protected. Also, any activity in the Gainesville area must be fully coordinated as outlined in Section 12.4.2. All construction and testing operations must be coordinated through the Environmental Office so that environmental impacts can be properly assessed. SSC construction contracts will contain language-requiring notification of the Contracting Officer of any potential archaeological finds discovered during construction. A Preliminary Environmental Survey, SSC Form # 696M, must be completed by any proponent of an action at SSC and submitted to NASA Environmental Management for consideration.

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Table 12 - 2
Era Man in Space Structures

BUILDING	YEAR OF COMPLETION
2101	1964
1100	1965
3204	1965
3305	1965
4120	1967
2204	1964,1966
3203	1966
3201	1966
2201	1964
1201	1964
4110	1965
4995	1965
1200	1965
3202	1965
1105	1965
4400	1966
2205	1965
2203	1965
1110	1965
7002	1966

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BUILDING	YEAR OF COMPLETION
7001	1966
3102	1966
3101	1966
8201	1965
2105	1967

Source: NASA/SSC Central Engineering Files.

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12.6 References

1. Butowsky, Harry A., 1984, National Park Service, Division of History, National Register of Historic Places Inventory Nomination Forum.
2. NASA, undated, Employee Handbook, John C. Stennis Space Center.
3. NASA, 1995, Historic Preservation Plan, John C. Stennis Space Center.
4. SEC, Inc., 1989, Five-Year Timber Management Plan for the John C. Stennis Space Center.
5. U.S. Army Corps of Engineers, Mobile District, 1989, Historic Properties Investigations, Fee Owned Lands in the Acoustic Buffer Zone, Hancock County, Mississippi, for National Aeronautics and Space Administration at John C. Stennis Space Center.
6. U.S. Army Corps of Engineers, Mobile District, 1988, Cultural Resources Investigations for National Aeronautics and Space Administration at National Space Technology Laboratories, NSTL, Mississippi.
7. Jones III, Robert and Callie Hall, 1996, Cultural Resources Survey of the Gainesville Courthouse and Surrounding Town - Final Report, for the National Aeronautics and Space Administration at John C. Stennis Space Center.
8. National Register of Historic Places Registration Form for the Gainesville Townsite, 1997.

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Figure 12-1 National Historic Landmarks at SSC

